

SECTION 1.0

DESCRIPTION OF THE PROPOSED PROJECT

1.1 INTRODUCTION

Pacific Gas and Electric Company (PG&E) is seeking authority, through submittal of a Section 851 Application (No. 00-05-035) to the California Public Utilities Commission (CPUC), to sell its heated Richmond to Pittsburg Fuel Oil Pipeline to a new owner, the San Pablo Bay Pipeline Company (SPBPC), a subsidiary of Tosco Corporation. In a separate application (No. 00-12-008) to the CPUC, SPBPC is seeking authority under Sections 216 and 228 of the Public Utilities Code to own and operate the Richmond-to-Pittsburg Fuel Oil Pipeline and Hercules Pump Station as a common carrier pipeline corporation. The sale would include the Hercules Pump Station, located in the City of Hercules, and the pipeline from its point of origin in Castro Street (adjacent to General Chemical's facility) in the City of Richmond, to the former PG&E Pittsburg Power Plant in Pittsburg. The Richmond to Pittsburg Pipeline and Hercules Pump Station (the Pipeline) would be sold in their current "as-is, where-is, with all faults" condition.

PG&E filed its Section 851 application on May 15, 2000; it filed a supplement to its initial filing on August 1, 2000, covering mostly rate and cost issues, and including copies of the sales agreement between PG&E and SPBPC, and a limited Phase II Environmental Site Assessment of the Hercules Pump Station conducted for PG&E. PG&E submitted a Proponent's Environmental Assessment (PEA) on November 8, 2000, and filed a supplement to the PEA on February 2, 2001. SPBPC filed its application on December 12, 2000. Two parties, the West Contra Costa Unified School District and SCS Development Company, filed protests to SPBPC's application on January 16, 2001, raising various issues. SPBPC filed a reply to those protests on January 26, 2001.

This Initial Study analyzes the potential impacts to the environment that would result from the sale of the Pipeline by PG&E, the reconstruction of a missing 4,000-foot section of the Pipeline in Martinez, CA, and the future operation of the pipeline and pump station by SPBPC. The Richmond to Pittsburg pipeline system and the Hercules Pump Station are "operational" in the regulatory sense, in that PG&E has maintained all the needed permits and approvals and conducted all the required maintenance and inspections that are required for an operating system. However, PG&E ceased using the system for moving fuel oil to its Pittsburg Power Plant in 1982, though some oil was moved through parts of the system as recently as 1991. Because the CPUC now must decide whether or not to approve the PG&E and SPBPC applications, the California Environmental Quality Act (CEQA) requires the Commission to consider the potential

environmental impacts that may occur as the result of its decisions and to require mitigation for any potentially significant impacts that are identified.

In conducting its CEQA analysis, the CPUC must set the environmental baseline, which is used to compare with the predicted effects that approval of the applications would have. Because there have been significant advancements in the design and construction techniques of oil pipelines since the Richmond to Pittsburg Pipeline was built, this Initial Study assumes that the baseline for conducting all the following potential environment impact analysis is the present day condition and status of the pipeline and pump station system (i.e., a system that has not been used for regularly scheduled fuel oil shipments for 19 years, and has not moved any products for 10 years). This document analyzes the potential changes that would occur as a result of approval of the PG&E and SPBPC applications, compared to the above baseline.

The Initial Study examines PG&E's PEA and the environmental information supplied by PG&E and SPBPC in their applications and their other filings, as well as information gained from interviews with agency personnel and from other available documents. SPBPC did not file a separate PEA for its application, but noted in its January 26, 2001 reply to protests that the environmental review of its application is "being performed as part of PG&E's companion application, A.00-05-035." The Initial Study assumes the sale of the Pipeline would not change its current CPUC-approved use: transport of "oil, petroleum, and products thereof" (CPUC Decision No. 84448).

Much of the environmental analysis focuses on the potential impacts of the replacement of a segment of the pipeline that was removed to allow construction of a railway station in the City of Martinez. Under an agreement between PG&E and SPBPC, PG&E has secured the necessary rights of way for the 4,000-foot replacement section of the pipeline in Martinez. SPBPC would have the responsibility to construct the 4,000-foot replacement section, if it chooses to do so and obtains the requisite permits and approvals. Though neither PG&E nor SPBPC have submitted detailed plans for the construction of the 4,000-foot segment, the construction activity is a reasonably foreseeable activity that would occur as a result of approval by the CPUC of these two applications, and therefore must be analyzed in the CEQA document produced for these applications.

As a condition of the approval of its application for authority to own and operate the Richmond to Pittsburg Fuel Oil Pipeline and Hercules Pump Station, SPBPC would be responsible for implementing any mitigation measures pertaining to construction of the 4,000-foot replacement segment in Martinez, and to future operation of the pipeline and pump station. Though other state and local agencies would have permit and approval authority over aspects of the construction of the missing section, the CPUC shall remain the lead agency for monitoring compliance with all mitigation measures mandated in this document. All approvals and permits obtained by SPBPC shall be submitted to the CPUC mitigation monitor for review prior to commencing the activity for which the permits and approvals were obtained.

1.2 PROJECT LOCATION

The approximately 35-mile pipeline is located in Contra Costa County, California, and primarily follows the San Francisco Bay shoreline between the cities of Richmond and Pittsburg (**Figure 1-1**).

Detailed maps indicating the location of the pipeline are included in Exhibits A and B of the Company's response to the CPUC Notice of Deficiency Regarding Remaining Generation Asset Applications, A.00-05-035, Richmond-to-Pittsburg Fuel Oil Pipeline (Response to Deficiency Report).

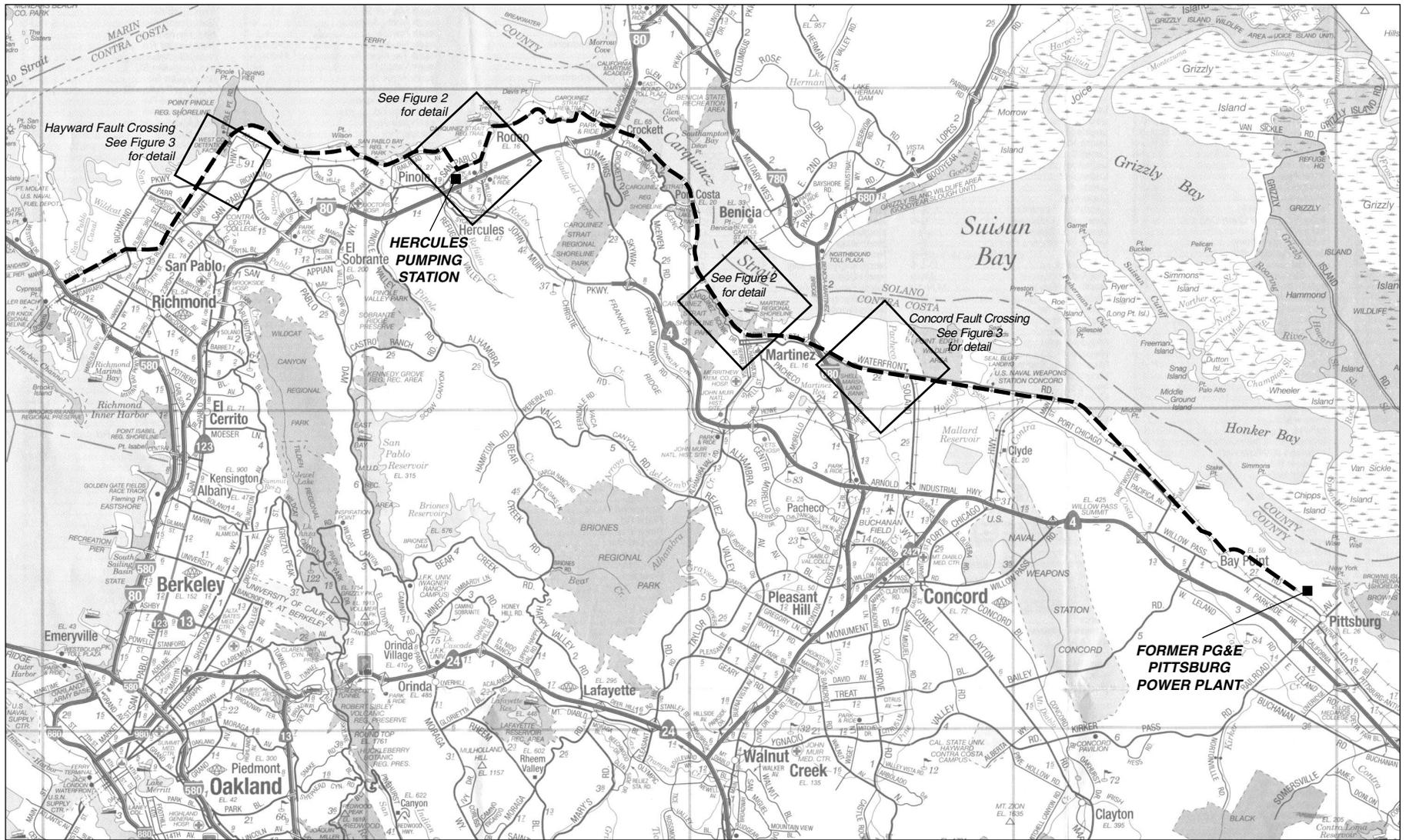
The pipeline originates west of Castro Street immediately adjacent to the General Chemical facility in Richmond. It travels northeast from the facility, along Castro Street to approximately the Richmond Parkway, then crosses Castro Street and enters the Union Pacific Railroad (UPRR) corridor. The pipeline follows the UPRR corridor north and east, crossing Wildcat Creek and San Pablo Creek. Before exiting the Richmond City limits, the pipeline leaves the UPRR corridor and parallels Cypress Avenue, just west of Pinole. It re-enters the UPRR corridor just east of Wilson Point and continues east through Pinole and into the City of Hercules. Approximately 1.5 miles east of the Hercules/Pinole city limits, the pipeline exits the UPRR corridor once again, traveling southeast directly to the Hercules Pump Station. The pipeline leaves the northeast corner of the Hercules Pump Station (see **Figure 1-2** for a local detail) and follows San Pablo Avenue through Rodeo, near the Tosco oil refinery, to Crockett. At Crockett, the pipeline continues through city streets, passing under Interstate 80 (I-80) at the Carquinez Bridge before re-entering the UPRR corridor just east of Crockett. The pipeline then continues east along the UPRR corridor through the City of Martinez, under Interstate 680 at the Benicia Bridge, across Pacheco Creek, and extends to just north of the limits for the City of Pittsburg, terminating just west of the Pittsburg Power Plant.

The Hercules Pump Station, the only above ground portion of the Pipeline, is located at 4200 San Pablo Avenue in the City of Hercules. The Hercules Pump Station is located on the north side of I-80 in the vicinity of the Tosco Rodeo refinery.

1.3 BACKGROUND

1.3.1 REGULATORY

The Pipeline was originally authorized pursuant to a Certificate of Public Convenience and Necessity (CPCN) issued by the CPUC on May 20, 1975 and constructed in 1975, as part of a 42-mile long pipeline extending from the Chevron Richmond Refinery to the former PG&E Pittsburg and Contra Costa Power Plants. The CPCN authorized PG&E to construct the Pipeline and related assets and use them to transport oil, petroleum, and other similar products to PG&E's former Pittsburg and Contra Costa Power Plants. The Pipeline was designed to provide the power plants with heated, low-sulfur, residual fuel oil from the refinery. The Pipeline was used

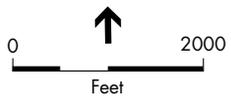
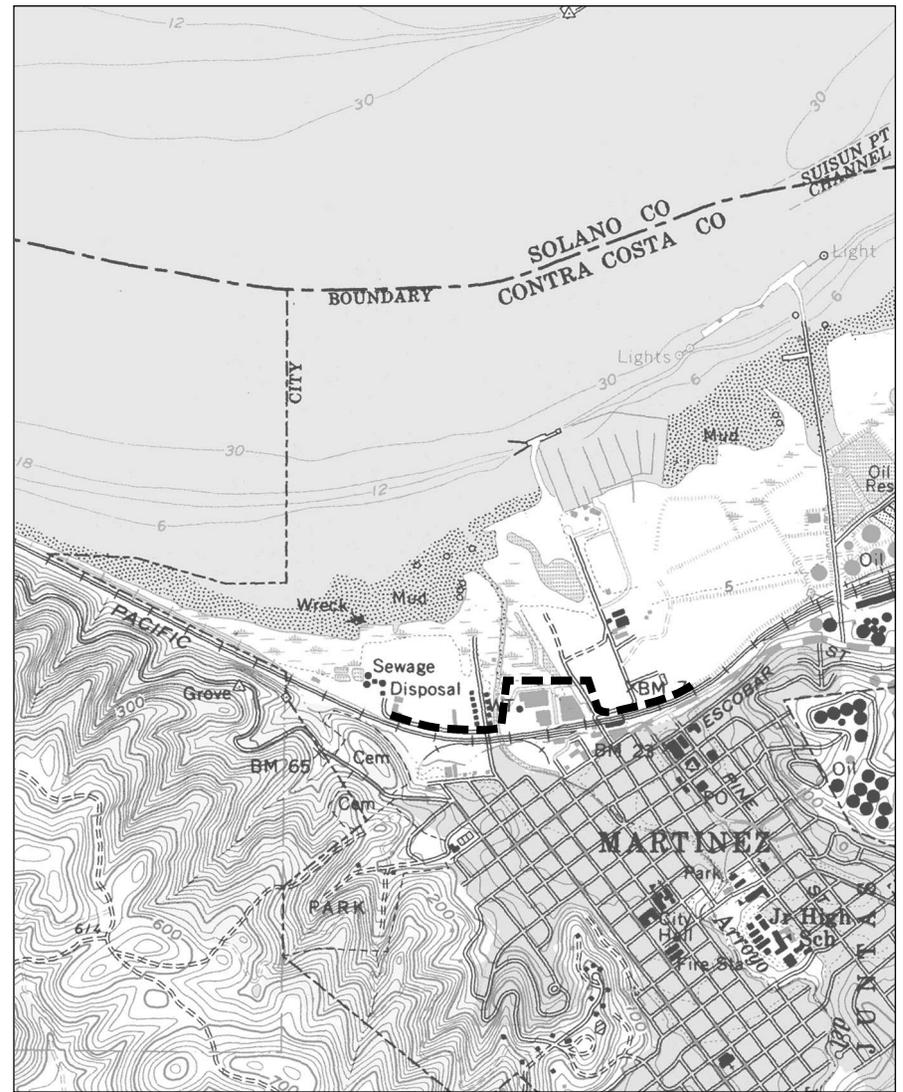
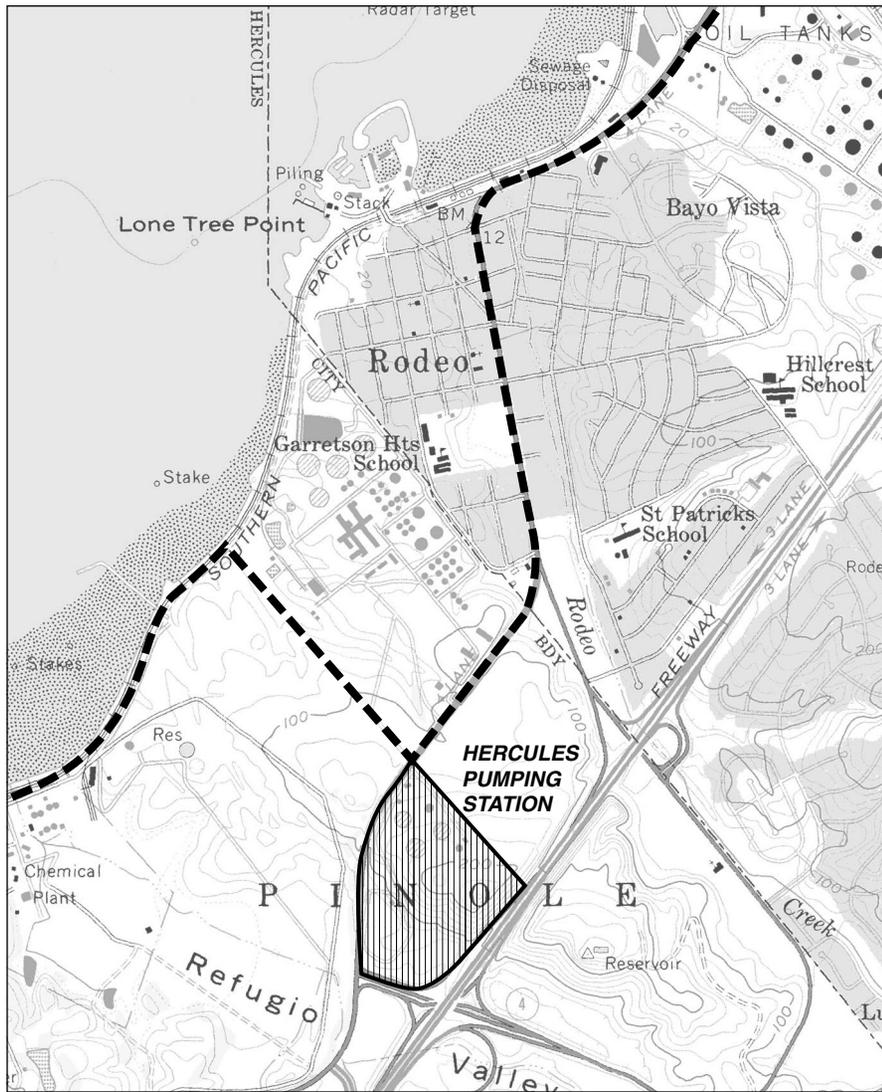


----- PG&E Richmond to Pittsburg Pipeline

SOURCE: Environmental Science Associates;
Base Map - California Automobile Association

PG&E Divestiture / 200496 ■

Figure 1-1
Project Location



----- PG&E Richmond to Pittsburg Pipeline

----- Proposed 4000' Replacement Pipeline Route

SOURCE: Environmental Science Associates

PG&E Divestiture / 200496 ■

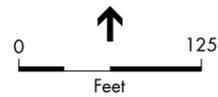
Figure 1-2
Site Locations

**Boundary of P.G. & E. Co. Fuel Oil Line Easement,
LD 2402-03-0723**

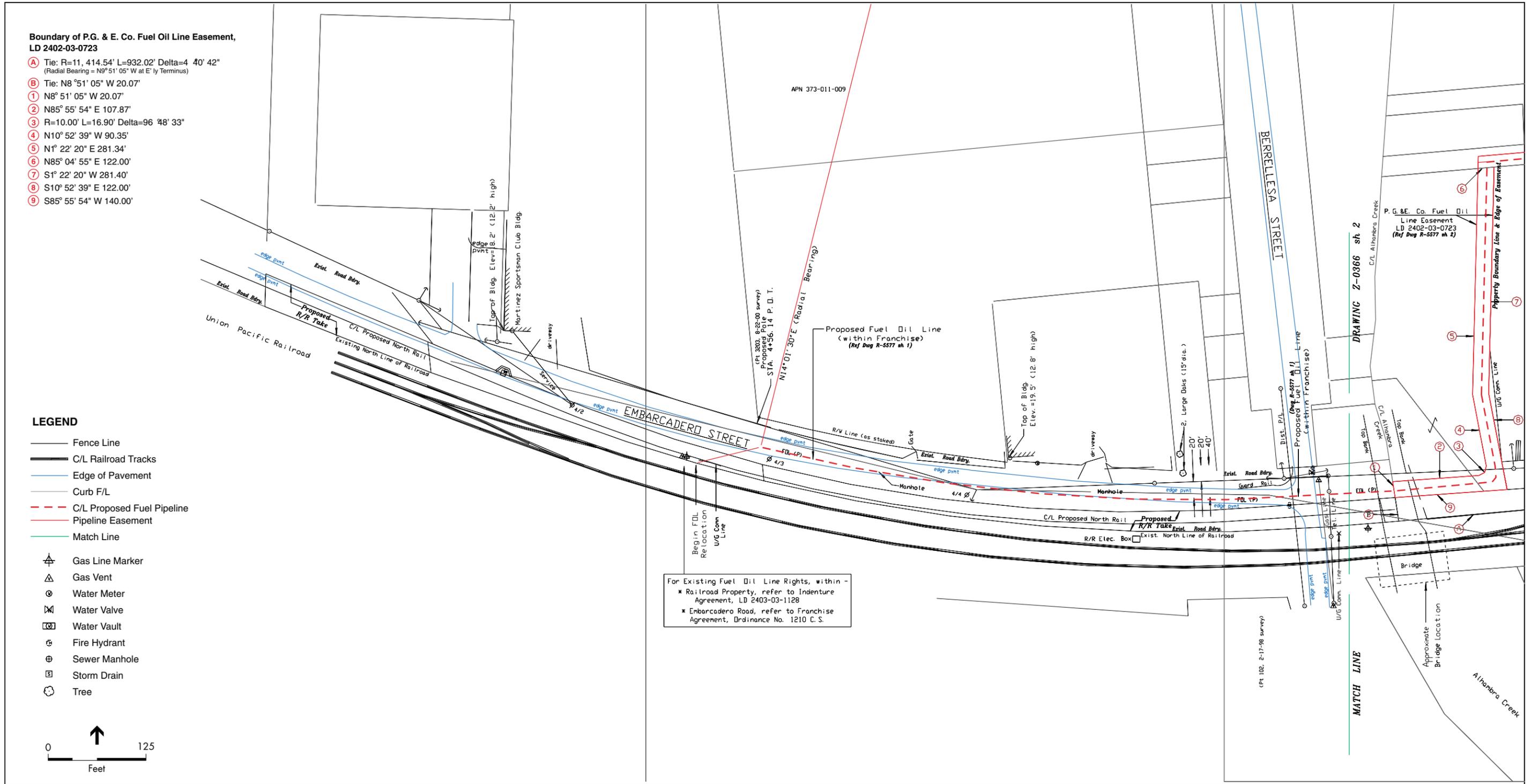
- Ⓐ Tie: R=11,414.54' L=932.02' Delta=4° 40' 42"
(Radial Bearing = N9° 51' 05" W at E'ly Terminus)
- Ⓑ Tie: N8° 51' 05" W 20.07'
- ① N8° 51' 05" W 20.07'
- ② N85° 55' 54" E 107.87'
- ③ R=10.00' L=16.90' Delta=96° 48' 33"
- ④ N10° 52' 39" W 90.35'
- ⑤ N1° 22' 20" E 281.34'
- ⑥ N85° 04' 55" E 122.00'
- ⑦ S1° 22' 20" W 281.40'
- ⑧ S10° 52' 39" E 122.00'
- ⑨ S85° 55' 54" W 140.00'

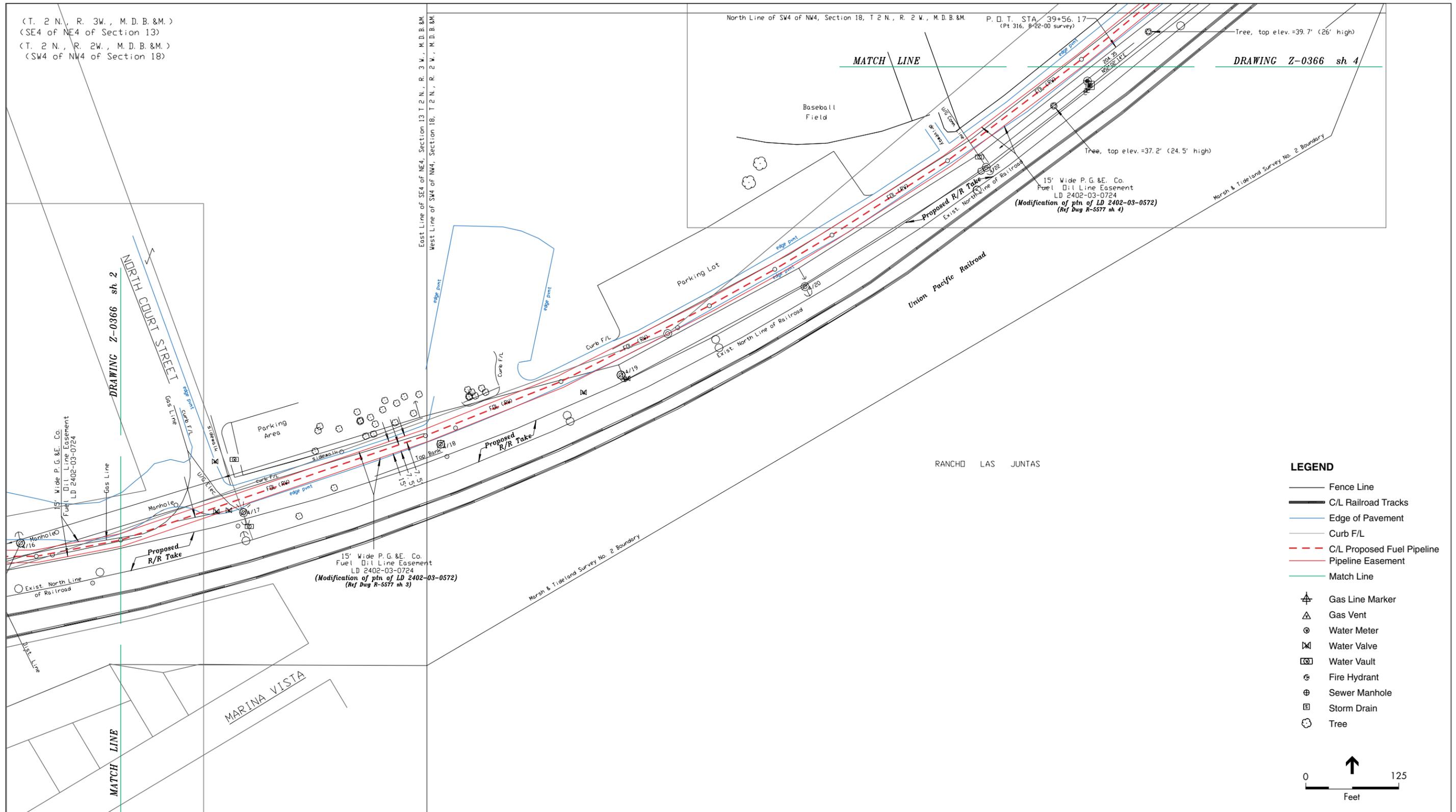
LEGEND

- Fence Line
- C/L Railroad Tracks
- Edge of Pavement
- Curb F/L
- - - C/L Proposed Fuel Pipeline
- Pipeline Easement
- Match Line
- ⊕ Gas Line Marker
- ⊕ Gas Vent
- ⊕ Water Meter
- ⊕ Water Valve
- ⊕ Water Vault
- ⊕ Fire Hydrant
- ⊕ Sewer Manhole
- ⊕ Storm Drain
- ⊕ Tree



For Existing Fuel Oil Line Rights, within -
 * Railroad Property, refer to Indenture Agreement, LD 2403-03-1128
 * Embarcadero Road, refer to Franchise Agreement, Ordinance No. 1210 C.S.

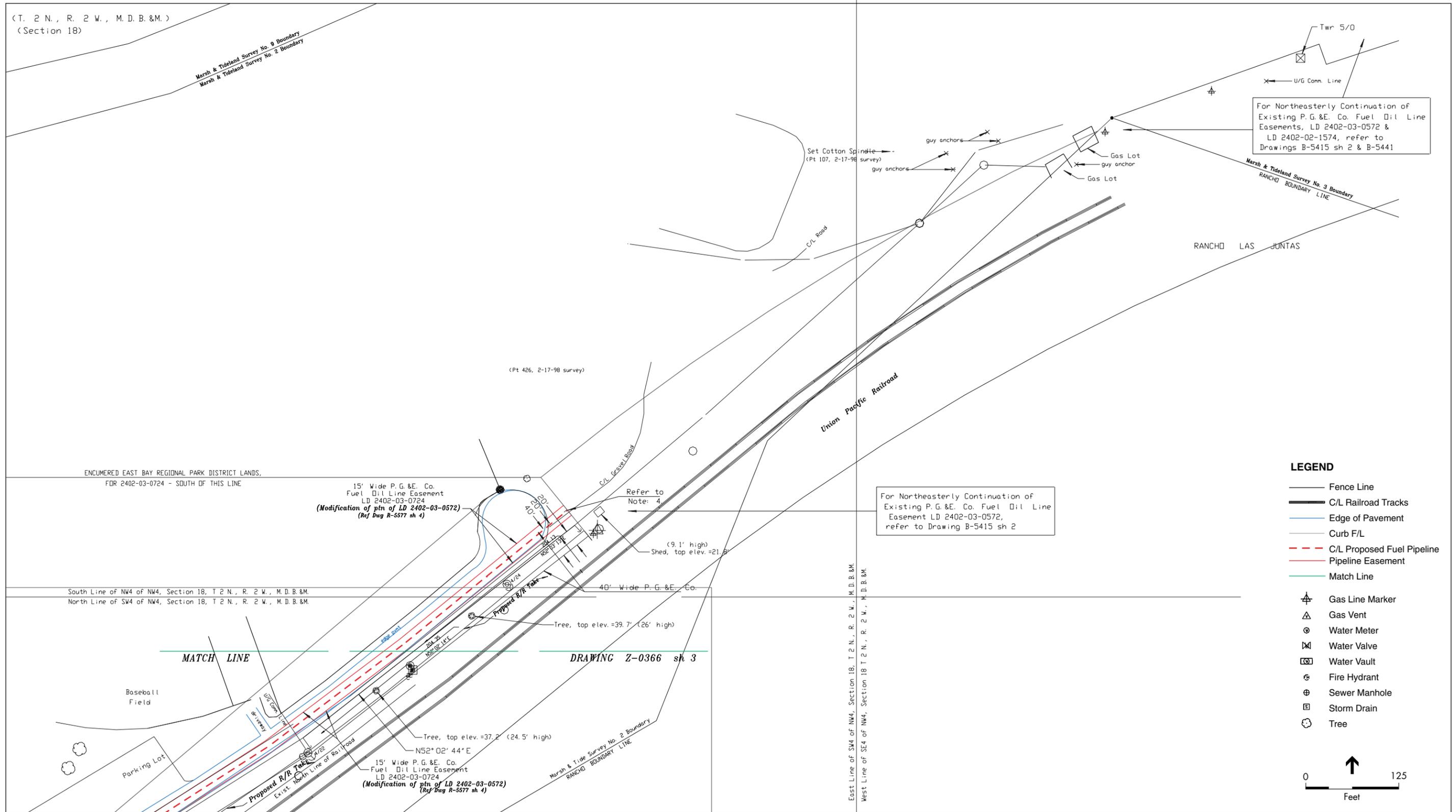




SOURCE: PG&E, Environmental Science Associates

PG&E Divestiture / 200496 ■

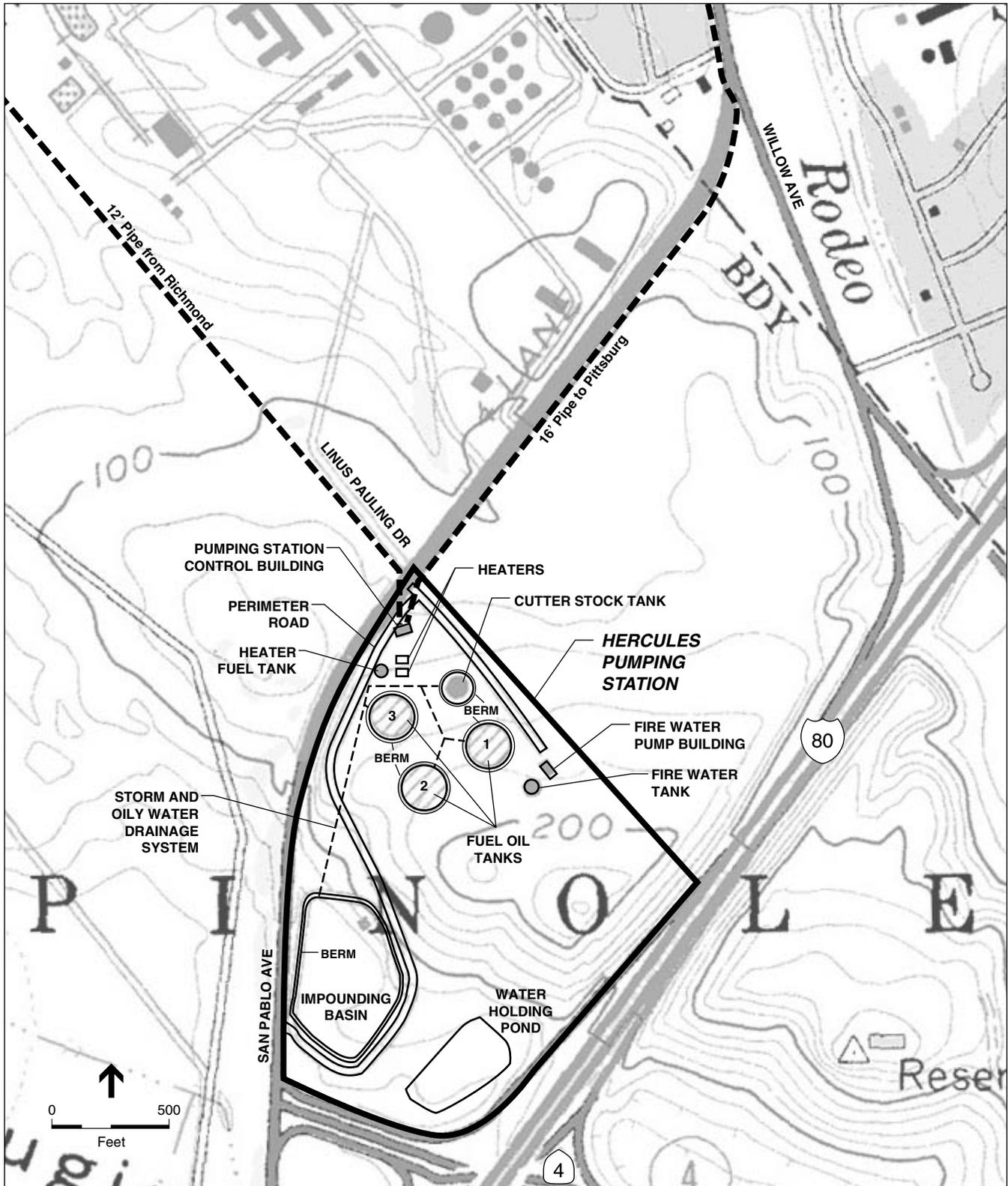
Figure 1-5
 Proposed 4000' Replacement Pipeline
 (Drawing Z-0366 Sheet 3)



SOURCE: PG&E, Environmental Science Associates

PG&E Divestiture / 200496 ■

Figure 1-6
 Proposed 4000' Replacement Pipeline
 (Drawing Z-0366 Sheet 4)



----- PG&E Richmond to Pittsburgh Pipeline

PG&E Divestiture / 200496 ■

SOURCE: Environmental Science Associates

Figure 1-7
Hercules Pumping Station Detail Map

in this fashion from 1976 to 1982, when PG&E reduced its use of low-sulfur fuel oil because of its increasing expense. The pipeline has been maintained to provide stand-by capability in case of natural gas supply interruptions or similar circumstances. The last major movement of oil through the pipeline was in 1991, with several subsequent oil movements made to maintain the integrity of the pipeline.

The CPCN will not need to be transferred to SPBPC if the sale is approved since SPBPC has applied to the CPUC for authority to own and operate the Richmond to Pittsburg Fuel Oil Pipeline and Hercules Pump Station as a regulated common carrier, as specified in PUC Sections 216 and 228. Under PUC Section 1001, companies whose operations are solely related to the transport of oil (i.e., oil pipeline companies) are not required to obtain a CPCN, but must obtain common carrier status from the CPUC prior to commencing operations. Safety oversight of the pipeline and pump station operations would be the responsibility of the Office of the State Fire Marshall, which in California assumes such responsibility for the federal Office of Pipeline Safety for both intrastate and interstate pipelines in the state.

Pipeline and Hercules Pump Station as a regulated common carrier, as specified in PUC Sections 216 and 228. Under PUC Section 1001, companies whose operations are solely related to the transport of oil (i.e., oil pipeline companies) are not required to obtain a CPCN, but must obtain common carrier status from the CPUC prior to commencing operations. Safety oversight of the pipeline and pump station operations would be the responsibility of the Office of the State Fire Marshall, which in California assumes such responsibility for the federal Office of Pipeline Safety for both intrastate and interstate pipelines in the state.

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1.3.2 RECENT HISTORY

In 1998, an approximately 4,000-foot section of the pipeline was severed in the City of Martinez at the request of UPRR, to allow for installation of two additional tracks and relocation of the Martinez Intermodal (Railway) Station. The severed section of the pipeline was capped, filled with a sand/cement slurry mix, and retained in place. The remaining ends of the pipeline were extended beyond the location of the new railroad tracks and capped for future reconnection.

In 1999, PG&E sold its Pittsburg and Contra Costa power plants, including the portion of pipeline between these two plants and associated pumping stations located at the plant sites. PG&E has not used the remaining 35 miles of the pipeline and the Hercules Pump Station to deliver fuel oil

since the sale of the power plants. However, the pipeline continues to be maintained as an active, regulated pipeline system.

1.4 TERMS OF THE DIVESTITURE

PG&E submitted a Section 851 application, seeking to sell its heated Richmond to Pittsburg Fuel Oil Pipeline to SPBPC, and is seeking to establish the market value of the pipeline and pump station assets under Section 367(b) using the sale price of the assets as the market value. The sale would include PG&E's Hercules Pump Station, located in the City of Hercules, and the pipeline, from its point of origin in Castro Street adjacent to the General Chemical facility in the City of Richmond to the Pittsburg Power Plant in Pittsburg. The Pipeline is being sold in its current "as-is, where-is, with all faults" condition. The sale of the Pipeline is also based on its current California Public Utilities Commission (CPUC)-approved use, which is the transport of "oil, petroleum, and products thereof."

The proposed sale of the Pipeline is a result of Assembly Bill 1890, which required the PG&E to establish the market value of its non-nuclear generation-related assets by December 31, 2001. The proposed sale complies with CPUC Decision 00-03-019, which ordered the Company to file an application by May 15, 2000, to establish the market value of its remaining non-nuclear generation-related assets. PG&E believes that the proposed sale is not subject to recent legislation (ABX1-6) that prohibits PG&E from selling "facilities for the generation of electricity," as the Richmond to Pittsburg Fuel Oil Pipeline and Hercules Pump Station assets are not facilities for the generation of electricity.

In order to assure continuity of public use and thereby avoid any potential termination of the private grants of easements, the Pipeline would be sold to a regulated public utility pipeline corporation. There are a number of restrictions contained in the land rights documents accompanying the sale, including: restrictions on the number and the size of the permitted pipeline(s); restriction to only transport "fuel oil" or "hot oil" through the pipeline; and, for the portions of the pipeline that traverse through an easement, the requirement of the fee owner's consent to a transfer of the rights granted in the easement.

Subject to certain limitations and exceptions, PG&E will retain the liabilities associated with soil and groundwater contamination existing prior to the sale, as follows: (i) at the Hercules Pump Station (regardless of whether PG&E caused such contamination); and (ii) along the pipeline right of way (but only if such contamination was caused by PG&E). Under the Purchase and Sale Agreement, PG&E would retain the right to conduct post-sale remediation, if necessary, on those certain matters for which it retains responsibility.

1.5 PROJECT COMPONENTS

Pipeline and related assets consist of the following:

- The Richmond to Hercules section of the pipeline – an insulated, 12-inch diameter fuel oil pipeline, approximately 10 miles in length, extending from its point of origin in Castro Street immediately adjacent to General Chemical’s Richmond facility, to the Hercules Pump Station, and associated land rights.
- The Hercules to Pittsburg section of the pipeline – an insulated, 16-inch diameter fuel oil pipeline, approximately 25 miles in length, extending from the Hercules Pump Station to the Pittsburg Power Plant, and associated land rights.
- The Hercules Pump Station, including associated tankage – The Hercules Pump Station is located on a 44.24-acre parcel (Parcel 135-7-110, Sections 1 and 2) and includes:
 - a control building,
 - a fire water pump building and tank,
 - an equipment pad with pumps and fuel heating units,
 - a facility drainage collection and treatment system,
 - aboveground storage tanks,
 - a two-thousand gallon underground containment tank,
 - transformers,
 - impounding basin, and
 - water-holding evaporation ponds.

1.6 GENERAL MAINTENANCE AND CONSTRUCTION METHODS

1.6.1 PROCEDURES FOR PIPELINE OPERATIONS

PG&E has stated that its records indicate there are no known locations on the Pipeline that need repair, except for the 4,000-foot section in Martinez that must be replaced. It anticipates that prior to operation, the new owner (SPBPC) will review all inspection records for the facilities and will conduct its own inspections after acquisition. Inspection of an existing pipeline may be done by using a “smart pig” device that can detect pipe-wall deterioration resulting from corrosion. Indications of reductions in wall thickness would be graded for severity and appropriate necessary maintenance actions would be taken.

The current “smart pig” launcher/receiver sites for the pipeline are located at the Pittsburg Pumping Station, Hercules Pump Station, and at the Richmond Metering Station. The Pittsburg Pumping Station is owned by Southern Energy, while the launcher/receiver at Richmond is located on property owned by Chevron. Any new owner of the Pipeline assets may need to secure agreement with Southern Energy and Chevron for continued access to the launcher/retriever sites.

Maintenance and repair activities on the pipeline could range from excavating certain sections to allow welding a full encirclement weld sleeve over impacted areas of the pipe (with wall thickness loss or other anomalies for relatively localized problems), to replacement of entire sections of the pipeline. Usually the replacements occur within five feet of the existing pipeline and within the existing easement.

A cleaning pig was run through the pipeline in 1998 and 1999 to remove any oil product from the pipeline. To preserve the pipe, the pipeline was filled with an inert gas where the pipeline is above the water table and with water treated with corrosion inhibitors in the marsh areas to keep the pipeline from floating to the surface. The inert gas will need to be purged and the treated water drained before the pipeline can be used again for transport of petroleum product. This could be accomplished initially when placing the pipeline in operation by pushing a pig through the pipeline with product at one end and diverting the treated water to an appropriate disposal site (i.e., a water treatment facility at one of the refineries), and venting off the gas at the other end. The treated water would be managed in accordance with applicable water quality regulations.

1.6.2 THE 4,000-FOOT REPLACEMENT SECTION IN MARTINEZ

Transport of product through the entire length of the pipeline is currently not possible due to the severed 4,000-foot section of pipeline in Martinez. In order for the new owner (SPBPC) to use the entire pipeline, this 4,000-foot section will need to be reinstalled. PG&E has obtained a 20-foot wide permanent easement (as shown in **Figure 1-2**) from the City of Martinez, and also has an easement from the East Bay Regional Park District to allow for the construction of the replacement section. SPBPC will be responsible, at its own expense, for the construction and reconnection of the new section of pipeline, and for obtaining any additional temporary easements or encroachment permits from the City of Martinez or the East Bay Regional Park District required for construction.

Because SPBPC has not defined in its Application (A.00-12-008) the exact methods to be used, this analysis assumes that the replacement pipeline section will be constructed using standard trenching and boring methods. Thus, this document examines impacts at a general level, based on available information and reasonable assumptions. The estimated construction right-of-way width, within which all construction activity would occur, would be 50 feet (a 15 to 20-foot permanent easement plus an additional 30-foot temporary easement). The depth of cover required for the pipeline would be a minimum of 42 inches. Material excavated from the trench would be stockpiled and could be used as backfill. Unsuitable materials from the excavation would be removed for disposal at an approved facility. The construction area would be minimized at stream crossings (where feasible) to minimize potential impacts. SPBPC would obtain all appropriate permits prior to construction, and would comply with permit mitigation measures and conditions, as further described below.

1.6.3 SYSTEM DESIGN OF THE REPLACEMENT SECTION

To comply with applicable state and federal regulations governing the construction and operation of “hazardous liquid” pipelines, which include oil pipelines, the 4,000-foot replacement section must be designed to the latest American Petroleum Institute Standard (APIS) and the size and grade of the pipe would be consistent with the extant section (16-inch outside diameter, 0.281-inch wall thickness, material grade X-46). Fuel oil pipelines nationally are subject to Pipeline Safety Regulations Title 49, Part 190-199, which specifies that the standard to which pipelines are designed, constructed, operated, and maintained is ASME B31.4, Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohol. The lengths of the pipe sections could vary based on construction needs. It is anticipated that the pipe would be purchased and installed in 40-foot long, pre-insulated sections.

1.6.4 CONSTRUCTION SCHEDULE AND PROCEDURES

Replacement of this section of pipeline would be expected to take approximately four to six weeks, depending on the time of year and weather conditions. Construction could be conducted up to 10 hours per day, five or six days per week, depending on the construction schedule and local requirements for keeping areas open to the public and businesses.

Though neither SPBPC nor PG&E have released details of any construction plans related to the missing section in Martinez, the likely sequence of events for a typical replacement project is as follows:

1. Determine which permits are required for the repair work and obtain necessary permits prior to commencing work.
2. Survey crews would mark the construction corridor limits.
3. The contractor would notify Underground Service Alert (USA) 48 hours before construction begins. This would alert the operators of other underground utilities to mark their facilities in the area of the construction.
4. The contractor would clear the right-of-way of vegetation. Water would be sprayed on unpaved surfaces, as needed, to control dust, following standard fugitive dust control measures mandated by the Bay Area Air Quality Management District.
5. The right-of-way would then be graded to remove the topsoil and surface rock, where needed, and topsoil would be stockpiled along the edge of the right-of-way for redistribution following construction.
6. Tractor-trailer trucks would deliver the insulated pipe sections to the job site. A hydrocrane or sideboom would unload the pipe sections at the site and place them along the cleared right-of-way.

7. Backhoes would dig the pipe trench and store the spoil material within the right-of-way. Workers would hand dig, when necessary, to prevent damage to underground utilities.
8. Conditions may require fitting the pipe to the right-of-way route. Hydraulic pipe bending machines would bend the pipe (or specially manufactured elbows could be used) to fit the contour of the trench.
9. Individual joints of pipe would be welded alongside the trench. An independent certified x-ray inspector would inspect the girth weld to ensure APIS compliance. An acceptable girth weld would then be prepared and coated. The contractor would check for and repair holes or voids in the pipeline coating.
10. If sharp angular rocks or other hard objects are encountered during excavation, the bottom of the trench would be padded with backfill material. This select backfill is bedding material that keeps the pipe coating free of damage.
11. Sidebooms would lower the pipe into the ditch.
12. Surveyors would locate the final horizontal and vertical position before the trench is backfilled. SPBPC would prepare record drawings for the entire replacement segment based on this as-built information.
13. Stockpiled spoil material or imported backfill would be used to cover the new pipeline. The backfilled soil would then be compacted.
14. Construction of the replacement line would continue until it is ready for tie-in to the existing pipeline at either end of the severed 4,000-foot section.
15. Cleaning devices known as “pigs” would be sent through the new section to clean out welding slag, dirt, debris, and other items that may have accumulated in the pipeline during construction. After hydrostatic testing, a pig would be sent back through the line to purge the water used for the testing.
16. The entire length of the new pipeline section would be hydrostatically pressure-tested with clean water. A certified test inspector would witness the hydrostatic pressure test to assure that it meets or exceeds the applicable construction standards. Water for the hydrostatic pressure test would be obtained from a municipal water source. Hydrotest water would be discharged into upland areas (grasslands) using a dewatering structure that would prevent erosion and movement of soil. Test water would not be directly discharged into any stream or wetland without prior authorization. A high-pressure, truck-mounted positive-displacement pump would pressurize the pipeline.
17. The contractor would make tie-in welds between the new pipeline and the existing section of pipeline after a successful hydrostatic pressure test. This would require the

removal of the caps installed on the existing section of the pipeline. The tie-in welds would then be x-rayed.

18. The entire right-of-way would be cleaned up after backfilling, compaction, hydrostatic testing, and tie-ins are completed. The contractor would return the right-of-way to its original contours and grade. The entire right-of-way would then be reseeded. The local Natural Resource Conservation Service office and the current landowners would be consulted to determine the seed mix and preferred method of restoration.

1.6.5 ROAD CROSSINGS

Following the new right-of-way obtained by PG&E, the new section would parallel Joe DiMaggio Drive east of Ferry Street and would parallel or be constructed in Embarcadero, west of Berrellesa Street. It would cross three roadways: Berrellesa Street, Ferry Street, and Joe DiMaggio Drive. The work would be completed using open trenching construction. The major construction activities associated with the installation are as follows:

- Saw-cut the pavement for the trench
- Excavate a trench for the pipeline
- Haul away and dispose of trenched and excavated spoils, if necessary to achieve compaction requirements, or stockpile excavated spoils
- Install the pipe
- Backfill the trench with either imported backfill, or native backfill
- Restore all paved surfaces and clean up the job site

1.6.7 CREEK CROSSINGS

Two creeks would be crossed for the installation of the 4,000-foot replacement section: Alhambra Creek and an unnamed drainage near Ferry Street. The PG&E application proposed that both creeks be crossed below the grade of the creek bed using auger boring or directional drilling techniques. These methods are described in more detail below. If SPBPC purchases the pipeline, as proposed, it would design and construct the creek crossing and would obtain all relevant permits and agency approvals prior to construction.

AUGER BORING

Auger boring involves excavating a bore pit on one side of the crossing and excavating a receiving pit on the other side. Boring utilizes an auger and power unit mounted on rails or a sideboom-suspended boring machine attached to a deadman (anchor). The power unit drives the auger inside a heavy-wall pipe casing until the power unit reaches the leading edge of the bore

pit. The power unit is disconnected from the auger, backed up, and a segment of the carrier pipe is welded to the casing segment already driven. Additional auger and carrier pipe segments are added successively until the bore reaches the other side of the crossing in the receiving pit. Soil excavated by the auger is removed from the pit by a backhoe. Once through, the power unit backs out the auger one segment at a time, leaving the pipeline in place under the crossing. In the receiving pit, the casing is removed.

DIRECTIONAL DRILLING

Directional drilling starts by boring a small-diameter pilot pipeline through to the receiving point. Drill bits are then dragged through the pilot hole using the pilot pipeline to increase the diameter of the bore to the size of the pipe required. High-pressure bentonite or polymer would be used, depending on the soil type, to cool the drill head, and either help lubricate the hole or help stiffen the soil. The pipe would be pulled back through the bored opening. Extra temporary workspace would be required on either side of the creek to accommodate drilling activities. If conducted properly, neither the creek nor the adjacent streamside vegetation would be disturbed during this procedure.

Spoils from the drilling operations would be in the form of mud and asphalt. During directional drilling, the lubricating fluid would be stored in containment tanks on the drilling machine. The fluid that emerges at the end of the borehole would be sucked up and pumped into trucks to be reused in the process. Spoils and asphalt would be loaded straight from the bore area onto trucks for removal or stored on site.

1.6.8 CONSTRUCTION EQUIPMENT

The pipeline replacement would likely require the following equipment:

- One to two backhoes
- One bulldozer
- One to two sideboom tractors
- One water truck
- One front-end loader
- Tractor-trailer rigs for delivery of the pipe to the right-of-way
- Pickup trucks for welders, surveyors, construction crews, x-ray technicians, and SPBPC inspectors

1.6.9 CONSTRUCTION INSPECTION

Work would be completed according to SPBPC plans and project specifications. Local agency construction inspectors, as well as CPUC and SPBPC construction monitors would be present to enforce the plans and project specifications.

1.6.10 CONSTRUCTION STAGING AND ACCESS

Access to the line would be on existing dirt and paved roads, including Berrellesa Street, Ferry Street, Joe DiMaggio Drive, and the railroad right-of-way. Widening or other improvements to these roads is not required.

Equipment, pipe, and other supplies needed for the work on this section would be stored either on the right-of-way or at staging areas close to the right-of-way. Permits and easements required for staging areas would be the responsibility of SPBPC.

MAINTENANCE PROCEDURES FOR HERCULES PUMP STATION OPERATIONS

Because the pump station has been maintained in stand-by status, only minor repair and routine maintenance would be required before restarting pumping operations. Repair and maintenance could include checking and replacing bearings and seals, inspecting pumps, calibrating flow meters, cleaning and inspecting tanks, replacing tank seals, etc. A maintenance crew of 5 to 10 members would likely perform the required maintenance.

Oily water (used for running cleaning pigs through the pipeline) is currently contained onsite in Main Storage Tank Number 3. Treatment or disposal of water in accordance with applicable regulations would be required before utilizing this tank.

1.6.11 REASONABLY FORESEEABLE USES OF THE PIPELINE

If its application is approved, SPBPC will be a common carrier pipeline corporation regulated by the CPUC. The Richmond to Pittsburg Fuel Oil Pipeline and Hercules Pump Station were constructed specifically to transport fuel oil and would require significant modification to be used for other purposes. Any change in use of the pipeline and Hercules Pump Station initiated by SPBPC would require CPUC approval. Any change in use would also require negotiation of amendments to easements and rights-of-way with numerous landowners. Tosco has one refinery in the area that could be fueled by petroleum. The Purchase and Sale Agreement prohibits SPBPC from seeking any change in the permitted use of the pipeline before the sale closes. With this restriction, it is reasonably foreseeable that for the immediate future following the sale, the use of the pipeline would remain as transport of petroleum products, quite possibly between any of the several Tosco refineries and transport facilities along the route of the pipeline.

1.6.12 POINTS OF ORIGIN AND DELIVERY

Identification of points of origin and points of delivery for the petroleum product along the Richmond to Pittsburg Fuel Oil Pipeline would be speculative at this point. It seems likely that tie-ins to the pipeline would need to be installed before the system would be fully operational.

The initial design of the pipeline anticipated future tie-ins by installing connection amenities for access to ship transportation at some of the refineries located along the shoreline between Richmond and Antioch. Also, the Hercules Pump Station was designed to allow movement of oil from a marine loading wharf that was once located at the former Gulf Refinery in Hercules, although no provisions were made to connect the wharf to the pipeline. There are also eight 10-inch tees on the Hercules to Pittsburg section of the pipeline, including one adjacent to Tosco's Rodeo refinery. There is also one 10-inch tap and a metering station at the Shore Terminal Tank Farm facility in Martinez.

Installation of tie-ins may require permitting and agency approval and land rights acquisition. These activities would be the responsibility of SPBPC, or the company desiring such a tie-in, once a plan for such facilities is developed. The permitting and approval activities, and the construction methods used for any such tie-ins would be similar to those used for the replacement section in Martinez, though (depending upon tie-in location and design) the pipeline used to complete the tie-ins could be considerably shorter than the replacement section in Martinez, and could be somewhat smaller in diameter. The identification of particular points of origin and delivery would be speculative at this time, although it is reasonable to assume that the end user of the petroleum product transported in the pipeline would be one of the several existing refineries near the pipeline route. Identification and analysis of specific points of origin and points of delivery for petroleum product from the Pipeline to Tosco's refinery would be speculative at this point as well. Therefore, this document will not further address the installation of tie-ins.

1.7 LONG-TERM OPERATION AND MAINTENANCE

1.7.1 HERCULES PUMP STATION

OPERATION

Operation of the Hercules Pump Station would include receiving the product from the pipeline, and storing, circulating, heating, and pumping the product to the pipeline. The procedures for performing specific actions would depend on the type of product being moved, (e.g., fuel oil or cutter stock), and the start and end points of the movement. The following general information applies to any oil product transfer at the Hercules Pump Station:

- When receiving and storing product, the piping system within the Hercules Pump Station allows for the measurement of product received.

- When circulating and heating the stored product, the heater can be fired with natural gas, diesel, or fuel oil. Normally, natural gas is used.
- Transporting heavy oil to another location would typically include preheating of the pipeline with cutter stock, preheating the oil, and pumping the oil to the other location. For this operation, the booster, main line pumps and heater would be used.
- A pipeline leak detection system would monitor the integrity of the pipeline and provides status at either the Hercules Pump Station control room or from Tosco's Santa Fe Springs Pipeline Control Center.

Currently, when the station is in stand-by mode, only one part-time operator is required to inspect the plant. When the station is in pumping mode, one operator is needed at the station to begin pumping. One operator remains-on-site while-system controls may be monitored by an operator off-site. Pump station valves can be operated from the control building.

MAINTENANCE

Maintenance would include checking and replacing bearings and seals, inspecting pumps, calibrating flow meters, and other routine mechanical inspections and replacements.

1.7.2 PIPELINE

OPERATION

When the pipeline is not in active use, the pipe is typically filled with cutter stock, which are primarily solvents that are compatible with oil. Prior to transporting fuel oil, the temperature of the pipeline is elevated to at least 50 degrees Fahrenheit above the pour point of the oil to be transported by moving heated cutter stock back and forth through the pipeline until the required temperature is reached. This operation is performed using the booster, heater, and mainline pumps at the Hercules Pump Station.

MAINTENANCE

Currently, a corrosion mechanic takes cathodic readings on the pipeline weekly. An operator is available to respond to USA requests and the pipeline route is inspected at least twice a month. An operator also inspects the condition of the isolation valves twice a year. Pipeline controls and communications are checked twice a month by an instrumentation/communications technician. Future operations must comply with US Department of Transportation Office of Pipeline Safety guidelines for inspections and maintenance, which include periodic inspections of the pipeline and all related components.